



Growth and Enhancement of Montana Students

Montana Office of Public Instruction

**Growth and Enhancement of Montana Students
(GEMS) Web Portal**

End User Manual

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TECHNICAL REQUIREMENTS

GEMS will run on computers and web browsers listed on [OPI's Recommended Computer Hardware and Software](#) page. Currently mobile and tablet devices are not supported. To get the most of GEMS, please make sure your screen resolution is set to 1280 X 1024.

OVERVIEW

PURPOSE AND OBJECTIVES

Welcome to the Montana Office of Public Instruction's GEMS User Manual.

The purpose of this document is to enable you to effectively use the tools and functions in the Growth and Enhancement of Montana Students (GEMS) site.

At the end of this training, you should be able to:

- Describe the purpose of the GEMS site
- Briefly describe the kinds of information that can be found in GEMS
- Efficiently navigate within GEMS
- Perform a keyword search
- Locate and compare Montana schools
- Locate and download documents
- Generate and download reports
- Describe the purpose of Data Analysis Dashboards
- Download data from the Data Analysis Dashboards

WHAT IS GEMS?

The Growth and Enhancement of Montana Students (GEMS) Warehouse will provide schools, policymakers, parents, and the public with unprecedented access to data and reports regarding Montana's public education system while protecting the educational privacy rights of students and families. GEMS will allow the Office of Public Instruction to efficiently and accurately manage, analyze and use education data, including individual student records. The data contained within GEMS will allow for educators to focus on accountability, effectiveness, and achievement. GEMS includes user-friendly tools that will enhance the ability to provide a quality public education.

There are three main menu items to help you make the most of the GEMS Data Warehouse:

- "I am interested in" *(for a menu of quick links to information categorized under the nine GEMS data domains)*
- "Reports and Data" *(for links to all reports within GEMS)*
- "Find Schools" *(for locating and comparing schools)*

GEMS provides two separate web sites targeted at different audiences

PUBLIC SITE:

The public website masks or hides data for groups with fewer than 10 students to protect confidential information about individual students as required by federal law. The masked data analysis is at the state, district, and school level. This site does not require a login to run reports or download documentation and is located at: <http://gems.opi.mt.gov>.

SECURED SITE:

The secured website displays unmasked school district data that is available only to authorized individuals, primarily Montana's school and district officials. This site requires a secured login and is located at: <https://securegems.opi.mt.gov>.

WHAT ARE THE AREAS WITHIN THE GEMS HOMEPAGE?

The screenshot shows the GEMS homepage with several key areas highlighted by numbered callouts:

- 1**: Points to the Montana Office of Public Instruction logo and name.
- 2**: Points to the "Reports & Data" menu item.
- 3**: Points to the "Find Schools" menu item.
- 4**: Points to the "Training Center" menu item.
- 5**: Points to the search interface for finding schools or school systems, which includes a search bar, filters (City, Public & Non-Public, All Grades, 5 mi), and a map of Montana.

The homepage content includes a "WELCOME TO GEMS!" message, a description of Montana's Statewide Longitudinal Education Data System, and a link to Criterion Reference Testing (CRT) data for 2011-12.

1. I AM INTERESTED IN

Here you will find a menu of quick links to information categorized under the nine GEMS data domains. Each domain contains submenus that list various useful reports and documents

2. REPORT AND DATA

The Reports & Data main menu item contains three submenus:

- The **Quick Fact Documents** submenu contains libraries of pre-generated, static reports and documents that are organized under each of the nine GEMS data domains. Quick Fact Documents can be printed but do not offer the ability to interact with data or perform automated analysis.
- The **Parameter Based Reports** submenu contains a set of filtering tools and pre-defined parameters that enable users to run data reports within the nine GEMS data domains. Parameter Based Reports can generate information that is more specific or granular than the information found in the Quick Facts Document libraries and can be printed and/or exported.
- The **Data Analysis Dashboards** submenu offers users data flexibility. Data can be generated in a variety of ways and can be drilled into for customized results. The charts and graphs can be printed and/or exported for further data analysis.

3. FIND SCHOOLS

The Find Schools main menu item contains five submenus:

- The **Map of Montana Schools** submenu contains the same map as the GEMS Homepage. It provides an interactive map to search for schools and systems across Montana.
- The **Side-by-Side Comparison** submenu allows a user to compare schools or districts. The comparison tool works similarly to online shopping sites.
- The **School Directory** submenu is an alphabetical listing of Montana schools and districts.
- The **School Profiles** submenu is a quick way to view a particular school's profile. While school profiles can be found in several places, this is the most direct way to view a school's profile.
- The **District Profiles** submenu is a quick and direct way to view a school district's profile.

4. TRAINING CENTER

The Training Center main menu item contains five submenus:

- The **Data Definitions and Explanations** submenu is an online data dictionary for the GEMS website.
- The **Online Training** submenu offers short, generalized training for the GEMS website in a visual and auditory format.
- The **User Manual** is a written document about the GEMS website and can be viewed, printed, or saved.
- The **Frequently Asked Questions** submenu is a great place to look for answers to any questions you may have about the GEMS website.
- The **Search the OPI Knowledge Base** submenu is a hyperlink to the Office of Public Instruction's knowledge base and offers a variety of information not restricted to GEMS

5. FIND SCHOOLS (GEMS HOME INTERACTIVE MAP)

The map on the GEMS home page is an easy-to-use tool that allows you to search for schools across Montana. The same map can be found as a submenu item under the "Find Schools" main menu.

WHAT INFORMATION CAN I FIND IN GEMS?

Information contained in GEMS is organized into nine data domains and are located under the "I am interested in" main menu. They are:

1. General District and School Information

Look here for demographic and facilities information about public school districts. This area includes contact information, district profiles, statewide reports, accreditation and NCLB status.

2. Program and Course Offerings

Look here for data about a wide variety of programs and services that support Montana's students, families, educators, and community members. View data on program areas such as Career and Technical education, General education, Traffic education and Adult and Basic education.

3. School Climate

Look here for data relating to Discipline Information and the Youth Risk Behavior (YRBS).

4. Student Achievement

Look here for resources and information regarding standards, standardized test scores, and progress towards state and federal accountability goals. Information includes federal Adequate Yearly Progress (AYP).

5. Student Services

Look here for data on after school programs, Student Transportation, Child Nutrition, Driver's Education.

6. School Finance

Look here for demographic and financial information about public school districts. View county fiscal data and grant information.

7. School Staffing and Teacher Characteristics

Look here for demographic, financial, and qualification information about Montana educators. View data on school staff, educator licensure, and highly qualified teachers.

8. Student Characteristics

Look here for data on enrollment, Migrant students, Limited English Proficient students, Special education, Indian education and Homeless students.

9. Student Engagement

Look here for data on student attendance and extracurricular activities.

10. NCLB Report Card

Look here to determine how Montana Schools and Districts are meeting the requirements of Elementary and Secondary Education Act as reauthorized by the No Child Left Behind Act of 2001.

HOW DO I NAVIGATE WITHIN GEMS?

Each time you access GEMS, you will be taken to the GEMS home page. From here you can quickly locate links to GEMS information.

The screenshot shows the GEMS home page with four numbered callouts:

- 1**: Points to the Montana Office of Public Instruction logo and text: "Montana Office of Public Instruction, Denise Juneau, State Superintendent, opi.mt.gov".
- 2**: Points to the GEMS logo and text: "Growth and Enhancement of Montana Students, gems.opi.mt.gov".
- 3**: Points to the search bar and "Login to Secure Site" link.
- 4**: Points to the navigation menu with links: "I am interested in", "Reports & Data", "Find Schools", "Training Center", and "Contact Us".

Below the navigation menu, the page says "WELCOME TO GEMS!" and "Montana's Statewide Longitudinal Education Data System". It includes a photo of students and text describing the system's capabilities. A link to "Student Achievement" is provided for CRT data. At the bottom, there is a search interface for schools or school systems with various filters and a map of Montana.

1. LOGO SECTION

You can return to the GEMS home page at any time by clicking the GEMS logo in the page header. The OPI logo in the page header takes you to the OPI website.

2. MAIN MENU BAR

A main menu bar is located near the top of the page. The main menu bar is always accessible from any page in GEMS. Place your mouse over an item on the main menu bar to open a submenu. Items in the submenu are clickable.

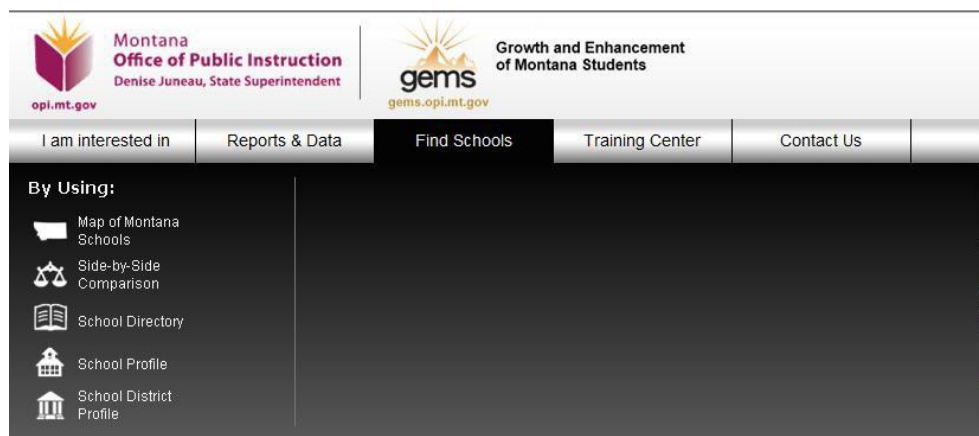
3. SEARCH

A search tool is located in the upper right corner of each page within GEMS. To perform a simple search, type a word or phrase into the search field. Click the magnifying glass icon to initiate the search.

4. LOGIN

Directly under the search tool on the public site, is the “Login” hyperlink. When Login is clicked, enter your username and password to access the secure website.

FIND SCHOOLS MENU ITEM

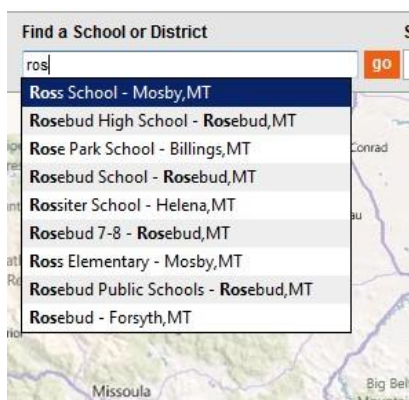


HOW DO I USE THE MAP OF MONTANA SCHOOLS SUBMENU?

The GEMS home page map can also be found under the main menu bar item “Find Schools” and the “Map of Montana Schools” submenu. The map can be used in three different ways.

First, you can use the fillable search fields to locate a specific school or system. The search criteria sections are located above the map.

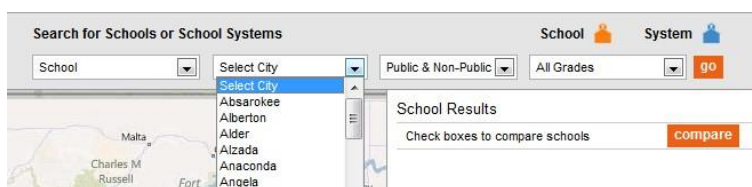
1. Find a School or School System Search Criteria



If you know the name of a specific school or system, you can begin typing it in the “Find a School or School System” section. A list of matching schools and systems begins to populate under the search field.

Click the appropriate choice and then click the orange GO button located directly right of the search criteria field.

2. Search for Schools or School Systems Search Criteria



If you do not know the name of a particular school or system, the second search criteria section has pull-down menus for search parameters.

After the parameters have been selected, click on the orange GO button located on the far right side.

When a school or system has been located, the map will populate the appropriate icon on the map along with a list of search results to the right of the map.

Once an icon is displayed, the map's second use is to view profile information. Click an icon and a mini menu will appear. Hyperlinks will appear depending on what type of information is available. One hyperlink that will always be available will be a profile. Click on the profile hyperlink to get more in-depth information.

Finally, you can perform side-by-side comparisons of up to six schools from the School Results list. Simply click the check box next to the schools you want to compare and then click the "Compare" button

HOW DO I USE THE SIDE-BY-SIDE COMPARISON SUBMENU?

To perform a side-by-side comparison of schools or districts, place your mouse over the "Find Schools" in the main menu bar. In the submenu, click the "Side-by-Side Comparison" link.

The first step is to select either the "Districts" or "Schools" radio button. In the text field type either the name of the district or school, or just type the first few letters of the name to select from an alphabetical list. Click the appropriate name and then click the "Add School/District" button to add it to the comparison table. Two more districts or schools can be added to the comparison table by repeating the previous steps.

To remove a school or district from the table, click the "Remove" checkbox at the top of the appropriate column.

HOW DO I USE THE SCHOOL DIRECTORY SUBMENU?

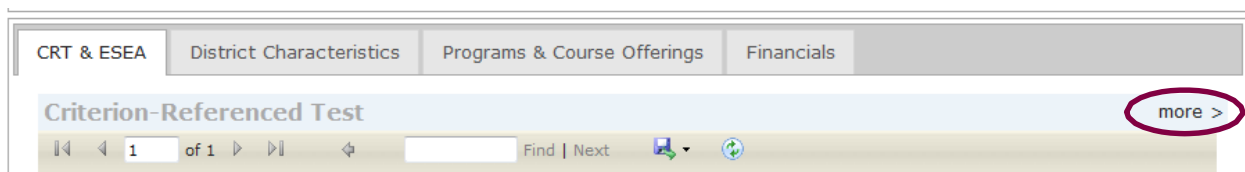
To find an alphabetical listing of Montana schools and districts, place your mouse over the "Find Schools" in the main menu bar. In the submenu, click the "School Directory" link. A listing of all accredited school districts appears. Click the plus sign to the left of the district name to view the schools within that district. Each school name is a hyperlink and will take you to the school's profile.

HOW DO I USE THE SCHOOL PROFILES AND DISTRICT PROFILES SUBMENUS?

Both the “School Profiles” and “School District Profiles” submenu items operate in the same manner. To view either a school or district’s profile, place your mouse over the “Find Schools” in the main menu bar. In the submenu, click the appropriate link.

Click the “Select School.../Select School District...” dropdown list and scroll through the schools to find the desired school and select it.

Four tabs are visible. While the CRT & ESEA is the default, School Characteristics, Programs & Course Offerings and Financials can be clicked on to view related information. The CRT & ESEA tab has two sections - “Criterion-Referenced Test” and the “Adequate Yearly Progress” reports. Click “more” in either of the two sections to view the detailed report for that section.



To print the profile, click the “Detail Report / Print Page” hyperlink located on the right side of the screen.

REPORTS & DATA MENU ITEM



QUICK FACT DOCUMENTS

WHAT ARE QUICK FACT DOCUMENTS?

The Quick Fact Documents submenu contains libraries of pre-generated, static reports and documents that are organized under each of the nine GEMS data domains. Quick Fact Documents can be printed and/or saved but do not offer the ability to interact with data or perform automated analysis.

HOW DO I ACCESS QUICK FACT DOCUMENTS?

To access Quick Fact Documents, place your mouse over “Reports and Data” in the main menu bar, and then click the “Quick Fact Documents” submenu.

A list of available documents will appear. When you have found the document you want, click the document name.

The file will open and it can be printed and/or saved by using the software application’s features.

PARAMETER BASED REPORTS

WHAT ARE PARAMETER BASED REPORTS?

The Parameter Based Report submenu contains a set of filtering tools and pre-defined parameters that enable users to run data reports within the nine GEMS data domains. Parameter Based Reports can generate information that is more specific or granular than the information found in the Quick Facts Document libraries and can be printed and/or exported.

HOW DO I RUN PARAMETER BASED REPORT?

In the main menu bar, place your cursor over “Reports and Data”, and then click “Parameter Based Reports” in the submenu.

Click a report name in the list of available reports.

Each report will have its own set of parameters to choose from. There will be some fields already filled with default values, however; the default value can be changed by clicking on the down triangle for choices. A mandatory parameter will need to be selected and will display a **<Select a Value>** in its field. As soon as a mandatory entry has been selected, a dependent entry will change from being inactive (grayed out) to active.

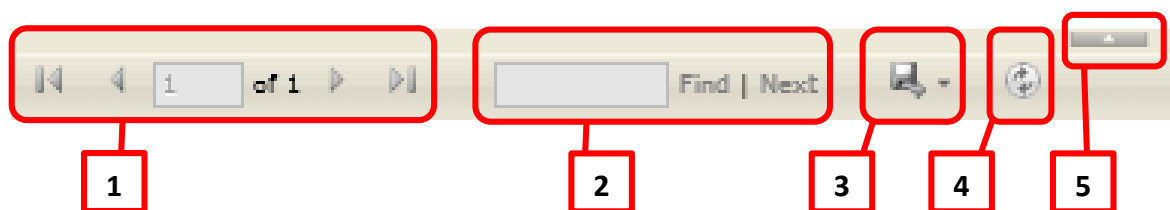
The screenshot shows a form with various dropdown menus and a 'View Report' button. Red boxes and arrows highlight specific features:

- Default Value:** Points to the 'Year' dropdown menu, which is currently set to '2011-2012'.
- Mandatory Value:** Points to the 'State/District/School' dropdown menu, which displays '<Select a Value>'.
- Dependent Value:** Points to the 'Content Area' dropdown menu, which is currently set to 'All'.
- View Report:** The 'View Report' button is circled in red.

Other fields visible include Grade, Economically Disadvantaged, Special Education, Gender, Ethnicity, Limited English Proficiency, and Alternate Assessment.

When you have selected the desired parameters, click the “View Report” button.

For each report, the following features are available in the report toolbar located at the top of the reports’ section.



1. An indicator shows the number of pages in the document. Use the forward and back arrows to navigate between different pages.
2. You can enter a word or phrase to search for in the document and click “Find”. The word or phrase will be highlighted in the document. To find the next instance of the word or phrase, click “Next”.
3. To export the report to one of several file formats, click the “Export” icon and select the desired format. Once exported, the report can be saved, printed, and manipulated per the application.
4. The refresh button may refresh the screen but it does not refresh the data or parameters.
5. The Expand/Collapse arrow toggles between showing and not showing the report’s parameters.



IMPORTANT: If you want to re-generate the report using different parameter selections, change the desired selections, and then click the “View Report” button.

HOW DO I DOWNLOAD A PARAMETER BASED REPORT?

After generating a Parameter Based report, you may download the report and save it to your computer. To download the report, you must first export the report to one of the available file formats. To export the report, click the export icon and select the desired format.

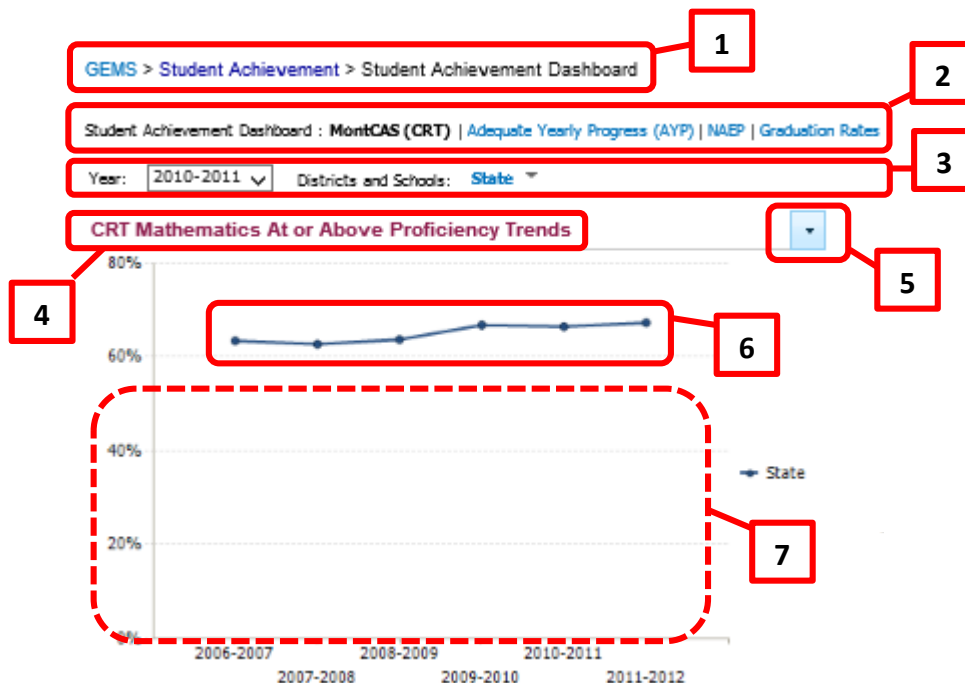
A new window will open. Click the “Save” option to save a copy to your computer and then click OK.

DATA ANALYSIS DASHBOARDS

WHAT ARE DATA ANALYSIS DASHBOARD?

Data Analysis Dashboards allow users to draw from a large amount of data to create customized charts and graphs. Using state-of-the-art technology, users will immediately see numerous small charts and graphs that can be quickly changed with a simple click of a mouse. Information can be filtered and drilled into; formats can be changed; and, data can be exported. Data Analysis Dashboard Reports are found within the Reports & Data main menu item.

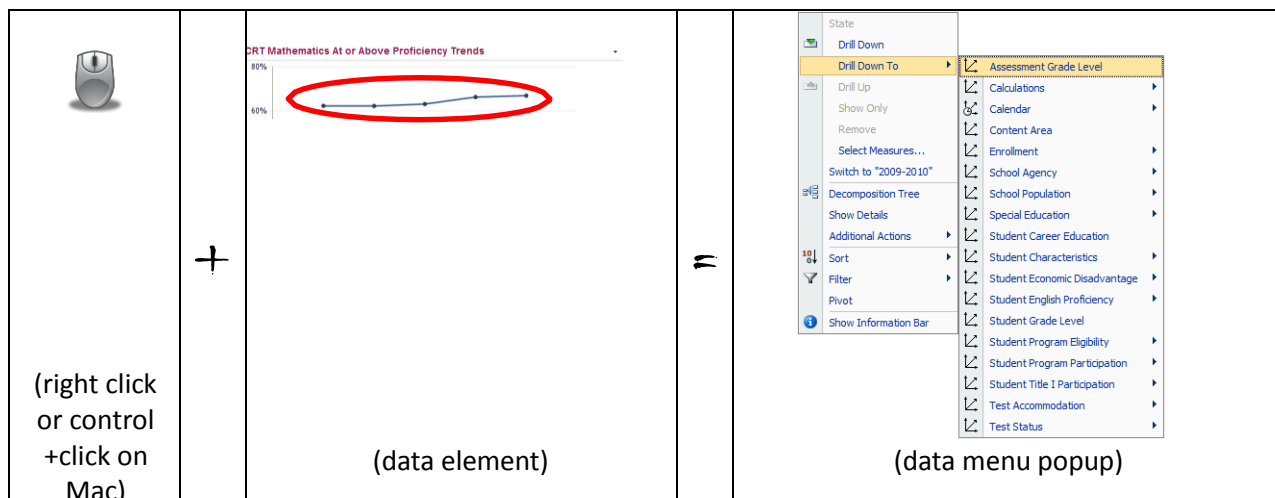
WHAT ARE THE MAIN AREAS IN A DASHBOARD?



- Breadcrumb:** Unlike Hansel and Gretel, these breadcrumbs will tell you exactly where you are and a click can get you back home.
- Available Dashboard Choices:** Different dashboards can be accessed by clicking on a name.
- Parameter:** Customizes what information is displayed on the dashboards.
- Title:** When clicked, it will maximize the chart/graph into the *current* window.
- Viewing Button:** The button is visible only when the mouse is in an individual chart/graph section. A powerful mini menu appears containing:
 - Open in New Window-ease of data manipulation, viewing, and printing while allowing exiting of window without exiting GEMS
 - Reset View-necessary to get back to original dashboard after experimenting
 - Export to PowerPoint or Excel-create professional document and ease of printing
- Data Element:** The line in a chart or bar in a graph. Using a mouse with the following actions will give you the following results:
 - Hovering - will display the exact data value in a popup window
 - Hover then click if pointer becomes a hand - automatically drills down the information
 - Right click (or Control + Click on Mac) - Menu with options (availability of options will vary)
- Chart/Graph Area:** The blank area of a chart/graph. While it may not contain data, right-clicking (or Control + Click on Mac) will bring up a report options menu.

WHAT CAN A MOUSE CLICK DO ON A DASHBOARD?

Mouse Action		Screen Element		Result
 (hovering)	+	 (data series)	"	 (exact data value displayed in a popup window)
 +  (hover + click)	+	 (data series)	"	 (automatically drills down information)
 (click)	+	 (Viewing button)	"	 (menu pops up)
 (click)	+	 (chart/graph title)	"	 (maximizes the chart/graph into the current window)
 (right click or control +click on Mac)	+	 (empty chart/graph area)	"	 (report menu popup)



HOW DO I PRINT/DOWNLOAD DATA FROM A DASHBOARD?

Click the Viewing button and choose either the *Export to Excel* or *Export to PowerPoint* from the menu. The individual chart/graph can be either saved or printed using the software program.

If you do not want to use Excel or PowerPoint, you can print by:

- Maximizing the chart/graph (*click on the chart/graph title or use the Viewing button and select Open in a New Window*) **then**
- Use the browser's printing function (*this may require changing the page orientation from portrait to landscape*)

